



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENTIFIC BOOKS

THE CONTROL OF HUNGER IN HEALTH AND DISEASE

By ANTON JULIUS CARLSON, *Professor of Physiology at the University of Chicago.*

A summary of the work of the stomach, with special reference to hunger and appetite, carried on at the Hull Physiological Laboratory, at the University of Chicago during the last four years. 219 pages. Price \$2.00 net.

University of Chicago Press, Chicago, Ill.

STATE SANITATION

By GEORGE CHANDLER WHIFFLE, *Professor of Sanitary Engineering at Harvard University. Member of the Public Health Council, Massachusetts State Department of Health.*

The primary object of this book is to set forth the past work of the Massachusetts State Board of Health, so that it may be known by the people of the present generation. 377 pages.

The Harvard University Press, Cambridge, Mass.

PRINCIPLES OF OCEAN TRANSPORTATION

By EMORY R. JOHNSON, Ph.D., So.D., *Professor of Transportation and Commerce of the University of Pennsylvania,* and GROVER C. HUBBNER, Ph.D., *Assistant Professor of Transportation and Commerce at the University of Pennsylvania.*

This book embodies all the principal changes that have recently occurred in methods of ocean transportation throughout the world. Illustrated with half-tones, maps and diagrams. 513 pages.

D. Appleton and Company, New York City

DESCRIPTIVE MINERALOGY

By WILLIAM SHIRLEY BAYLEY, *Professor of Geology at the University of Illinois*

A text-book for college classes, designed to give the student a comprehensive view of modern mineralogy, rather than a detailed knowledge of many minerals. 268 illustrations. 542 pages.

D. Appleton and Company, New York City

INORGANIC CHEMISTRY

By ALEXANDER SMITH, *Professor of Chemistry in Columbia University.*

A thorough treatise of inorganic chemistry for students beginning this study in college, university or professional schools. Third edition. 925 pages.

The Century Co., New York City

SOIL PHYSICS AND MANAGEMENT

By J. G. MORIER, B.S., *Professor of Soil Physics, University of Illinois,* and A. F. GUSTAFSON, M.S., *Assistant Professor of Soil Physics, University of Illinois.*

The publication of this book fulfils three purposes: First, a text-book for agricultural students; second, a reference book for the practical farmer; and, third, an aid to the landowner who desires information in the management of his land. 202 illustrations. 442 pages.

J. B. Lippincott and Company, Philadelphia, Pa.

FIELD BOOK OF INSECTS

By FRANK E. LUTZ, *Associate Curator, Department of Invertebrate Zoology, American Museum of Natural History*

A popular treatise of the more common insects, with special reference to those of the Northeastern United States. 800 illustrations. 409 pages. Price, \$2.50 net.

J. P. Putnam's Sons, New York City

A TEXT-BOOK OF PRECIOUS STONES

By FRANK B. WADE, B.S., *Head of the Department of Chemistry, Shortridge High School, Indianapolis, Ind.*

This book presents, in as natural an order as possible, the fundamental principles and methods in use for identifying precious stones. 318 pages. Price, \$2.00 net.

J. P. Putnam's Sons, New York

COMPARATIVE ANATOMY OF VERTEBRATES

By J. S. KINGSLEY, *Professor of Zoology at the University of Illinois*

A text-book of comparative anatomy, laying special emphasis on the embryological side of the study. Second edition. 406 illustrations. 449 pages. Price, \$2.00 net.

P. Blakiston's Son and Company, Philadelphia, Pa.

TOPOGRAPHY AND STRATEGY IN THE WAR

By DOUGLAS WILSON JOHNSON, *Associate Professor of Physiography, Columbia University.*

This book treats the relationship between inanimate nature and the science of war and gives a picture of the different war fronts in order that the military campaigns of the war may be followed with greater ease. 211 pages. \$1.75 net.

Henry Holt & Co., New York

GENERAL ZOOLOGY

By A. S. PEARSE, *Associate Professor in the University of Wisconsin.*

This book has been written to be read by students of eighteen to twenty years of age. With this idea in view both the illustrations and text have been prepared more in the style of a natural history than of an anatomy. 366 pages.

Hear Holt & Co., New York

HISTORY OF MEDICINE

By FIELDING H. GARRISON, *Principal Assistant Librarian Surgeon General's Office, Washington, D. C.*

This volume has been written with a definite intention of stimulating the student to do his own thinking and research, by interesting him in the subject from the start. 905 pages. Cloth \$6.50 net.

W. B. Saunders Co., Philadelphia, Pa.

A SHORT HISTORY OF SCIENCE

By W. T. SEDGWICK and H. W. TYLER of the *Massachusetts Institute of Technology.*

This volume seeks to furnish the student and the general reader with a concise account of the origin of our scientific knowledge and scientific methods. 474 pages. Price \$2.50 net.

The Macmillan Co., New York

EVERYMAN'S CHEMISTRY

By ELLWOOD HENDRICK, *New York City.*

This book aims to give to the average man a general realization of the tremendous importance of chemistry and its application in actual life. 373 pages.

Harper & Brothers, New York

Publications of Carnegie Institution of Washington

The publications of the Institution now number over 350 volumes, the subjects including Anatomy, Archaeology, Astronomy, Botany, Chemistry, Economics and Sociology, Embryology, Experimental Evolution and Heredity, Engineering, Folk-Lore, Geology, History, International Law, Literature, Mathematics, Medicine, Nutrition, Philology, Physics, Zoology. Classified and descriptive lists will be sent postpaid on application.

Botany and Related Subjects *In Press*

248. BRITTON, N. L., and N. N. ROSE. The Cactaceae. Descriptions and Illustrations of Plants of the Cactus Family. Quarto in 4 vols. Volume I will appear in June or July, 1919. It will be illustrated by 301 text-figures and 36 plates; of the latter, 28 are in colors.
286. WEAVER, JOHN E. The Ecological Relation of Roots. Octavo.
287. SPOHR, H. E. The Carbohydrate Economy of Cacti. Octavo.
289. DOUGLAS, A. E. Climatic Cycles and Tree-growth. Octavo.
290. CLEMENTS, FREDERIC E. Plant Indicators: The Relation of Plant Communities to Conditions and Practices. Octavo.
297. MACDOUGAL, D. T. Hydration and Growth. Octavo.

Orders for above publications may be made through book-sellers or sent directly to the Institution.

All communications should be addressed to

**CARNEGIE INSTITUTION OF WASHINGTON
WASHINGTON, D. C.**

Marine Biological Laboratory

Woods Hole, Mass.

INVESTIGATION

Entire Year

Facilities for research in Zoology, Embryology, Physiology and Botany. Seventy-six private laboratories, \$100 each for not over three months. Thirty tables are available for beginners in research who desire to work under the direction of members of the staff. The fee for such a table is \$50.00.

INSTRUCTION

July 2 to August 12,
1919

Courses of laboratory instruction with lectures are offered in Invertebrate Zoology, Protozoology, Embryology, Physiology and Morphology and Taxonomy of the Algae. Each course requires the full time of the student. Fee, \$50. A lecture course on the Philosophical Aspects of Biology and Allied Sciences is also offered.

SUPPLY DEPARTMENT

Open the Entire Year

Animals and plants, preserved, living, and in embryonic stages. Preserved material of all types of animals and of Algae, Fungi, Liverworts and Mosses furnished for classwork, or for the museum. Living material furnished in season and ordered. Microscopic slides in Zoology, Botany, Histology, Bacteriology. Price lists of Zoological and Botanical material and Microscopic Slides sent on application. State which is desired. For price lists and all information regarding material, address

GEO. M. GRAY Curator, Woods Hole, Mass.

The annual announcement will be sent on application to the Director, Marine Biological Laboratory, Woods Hole, Mass.

SCIENCE

A WEEKLY JOURNAL DEVOTED TO THE ADVANCEMENT OF SCIENCE

FRIDAY, JULY 4, 1919

Methods of securing Better Cooperation between Government and Laboratory Zoologists in the Solution of Problems of General or National Importance: Dr. H. M. Smith, Professor Henry B. Ward.

Medicine, a Determining Factor in War: Dr. Alexander Lambert.

Walter Gould Davis: Professor R. DeC. Ward.

Scientific Events:—

The Volcanic Eruption in Java; Expedition from the California Museum of Vertebrate Zoology to Alaska; International Engineering Standardization; Resolutions of the American Federation of Labor on Scientific Research; National Research Fellowships.

Scientific Notes and News.

University and Educational News.

Discussion and Correspondence:—

Metcalf and Bell upon Salpidae; Professor Maynard M. Metcalf. "Working up" in a Swing; Professor Arthur Taber Jones. A Quick Method of Eliminating Seed-borne Organisms of Grain: I. E. Melhus, L. L. Rhodes.

Scientific Books:—

Jellicoe on The Grand Fleet: A. M.

Special Articles:—

Variations in the Electrical Potential of the Earth: Professor Francis E. Nipher.

The Buffalo Meeting of the American Chemical Society: Charles L. Parsons.

Single Numbers 15 cents

FRIDAY, JULY 11, 1919

Methods of Securing Better Cooperation between Government and Laboratory Zoologists in the Solution of Problems of General or National Importance: B. H. Ransom, Professor Herbert Osborn.

The Threatened Extinction of the Box Huckleberry: Dr. Frederick V. Coville.

Vinal N. Edwards: Dr. Hermon C. Bumpus.

Scientific Events:—

The Lister Institute; Science in Australia; Sigma Xi at Syracuse University; The Tropical Research Station of the New York Zoological Society in British Guiana.

Scientific Notes and News.

University and Educational News.

Discussion and Correspondence:—

The Discovery of Calculus: Professor Arthur S. Hathaway. The Poor Diener: E. R. L.

Scientific Books:—

Recent Paleobotany in Great Britain: Professor A. C. Seward

Special Articles:—

The Black Chaff of Wheat: Drs. Erwin F. Smith, L. R. Jones and C. S. Reddy.

The Buffalo Meeting of the American Chemical Society: Dr. Charles L. Parsons.

Annual Subscription \$5.00

Published every Friday by

THE SCIENCE PRESS

LANCASTER, PA.

GARRISON, NEW YORK.

Sub-Station 84: New York

SCIENCE PROGRESS

A QUARTERLY REVIEW OF SCIENTIFIC THOUGHT, WORK AND AFFAIRS

EDITED BY SIR RONALD ROSS, F.R.S., D.Sc., M.D., Etc.

SCIENCE PROGRESS owes its origin to an endeavor to found a scientific journal containing original papers and summaries of the present state of knowledge in all branches of science. The necessity for such a journal is to be found in the fact that, with the specialization which necessarily accompanies the modern development of scientific work and thought, it is increasingly difficult for even the professional man of science to keep in touch with the progress achieved and the trend of thought in subjects other than those in which his immediate interests lie. This difficulty is felt by teachers and students in schools and colleges, and by the general educated public interested in scientific questions. SCIENCE PROGRESS claims to have filled this want.

Published early in January, April, July, and October, by John Murray, 50a, Albemarle Street, London, W., England. Price of a single number is 6/- net. Annual subscription (including postage) 25/6.

Important Recent Special Publications of the Philippine Bureau of Science

SPECIES BLANCOANÆ: A critical revision of the Philippine species of plants described by Blanco and by Llanos. By E. D. Merrill. 424 pages. Postpaid \$2.25.

PHILIPPINE WATER SUPPLIES: By G. W. Heise and A. S. Behrman. 218 pages and 19 plates. Postpaid \$1.75.

AN INTERPRETATION OF RUMPHIUS'S HERBARIUM AMBOINENSE: By E. D. Merrill. 596 pages and 2 maps. Postpaid \$3.00.

The Philippine Journal of Science, a monthly (no longer issued in sections), per year \$5.00.

A list of the publications of the Philippine Bureau of Science and a sample copy of the Philippine Journal of Science will be sent upon request.

Subscriptions and orders for publications should be sent to

Philippine Journal of Science

Bureau of Science

Manila, P. I.

The Microscope

12th Edition, Published April 10, 1917

Re-Written and largely Re-Illustrated

By SIMON HENRY GAGE of Cornell University

Postpaid \$3.00

COMSTOCK PUBLISHING CO., Ithaca, N. Y.

WHITE RATS FOR SALE

Guinea Pigs, Rats, Rabbits, and other Laboratory Animals

Standing orders solicited

The Laboratory Animal Supply Co.
Garrison, N. Y.

ROMEIKE'S

PRESS CLIPPINGS

are now an absolute necessity for every scientific man. By methodical searching through the most important papers and periodicals published in this country and abroad we are able to supply you at short notice with information on any subject which perhaps you would be unable to find yourself in libraries or reference books after spending days or even weeks at such a task. Write for further information.

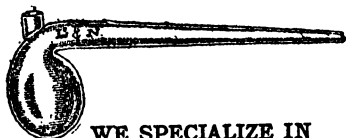
HENRY ROMEIKE, Inc.

106-110 Seventh Avenue

New York City

Are You About To Buy Chemical Apparatus?

Drop us a line before you buy and we'll try to show you what you may gain from buying from us.



WE SPECIALIZE IN
 Graduated and Blown Glassware
 Thermometers, Hydrometers
 Coors and Guernsey Porcelain
 Pyrex Glassware
 All kinds Filter Paper, Hardware
 Heavy Separatory Funnels and Kipp's
 Generators and Stains

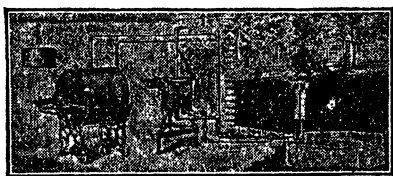
Our 500-page catalogue sent upon request

LENZ APPARATUS CO.

Manufacturers—Dealers—Importers

18 East Sixteenth Street
 New York City, U. S. A.

GAS—GAS



The "Detroit" Combination Gas Machine

Automatically makes the best
 and cheapest gas for

Laboratory Uses of Every Character

Heating—Cooking—Lighting
 Over 30,000 in daily use

*Descriptive catalogue and names of users in your
 locality sent on request*

**THE DETROIT HEATING &
 LIGHTING CO.**

612 Wight St.

Detroit, Mich.

Established 1868

Published on June 20

Carnegie Pensions

By J. McKEEN CATTELL

Together with Extracts from Letters from Two Hundred and Fourteen College and University Professors, an Article on the History of the Carnegie Foundation by Joseph Jastrow, and the Reports of the Committee on Pensions and Insurance of the American Association of University Professors.

Pages viii+253. Price, \$1.50 Postpaid

THE SCIENCE PRESS

GARRISON

NEW YORK

Any of the following recent publications of The Prudential Insurance Company of America will be sent free on request:

Pauper Burials and the Interment of the Dead in Large Cities.

A Plan for a more Effective Federal and State Health Administration.

Failure of German Compulsory Health Insurance—A War Revelation.

A Plea and a Plan for the Eradication of Malaria Throughout the Western Hemisphere.

The Malaria Problem in Peace and War.

The Sanitary Progress and Vital Statistics of Hawaii.

Army Anthropometry and Medical Rejection Statistics.

Influenza—Chart.



**The Prudential Insurance Company
 OF AMERICA**

HOME OFFICE, NEWARK, N. J.

Forrest F. Dryden, President

Incorporated Under the Laws of the State of New Jersey

The Scientific Monthly

Entered as second-class matter October 1, 1915, at the post-office of Lancaster, Pennsylvania,
under the Act of March 3, 1879

CONTENTS OF THE JUNE NUMBER

The Place of Modern Languages in Research, Particularly in Geological Research. The Late Professor Joseph Barrell.

The Bioclimatic Law as Applied to Entomological Research and Farm Practice. Dr. Andrew D. Hopkins.

An Entomological Cross-Section of the United States. Professor J. Chester Bradley.

Deodat Dolomieu. Dr. George F. Kunz.

Window Glass as a Factor in Human Evolution. R. E. Danforth.

The Effects of the War on the American People. Dr. Aleš Hrdlička.

Industry and Food Prices after the War. Dr. J. Pease Norton.

Nervous and other Forms of Protoplasmic Transmission. Ralph S. Lillie.

The Progress of Science:
Scientific Meetings and the National Academy of Sciences; The Structure of the Atom; The Origin of Civilization; Scientific Items.

Index to Volume VIII.

CONTENTS OF THE JULY NUMBER

Physical Rejection for Military Service; Some Problems of Reconstruction. Dr. J. Howard Beard.

The Eugenic Aspect of Selective Conscription. Dr. Roswell H. Johnson.

The Ferns of the Rain-Forest. Dr. Clifford H. Farr.

The Development of Conceptions of Photosynthesis since Ingenhousz. H. H. Spoehr.¹

Man and His Nervous System in the War. Professor F. H. Pike.

Modern Commentaries on Hippocrates. Dr. Jonathan Wright.

The Commercial Control of the Mineral Resources of the World. J. E. Spurr.

Feudal Times in Venezuela. Professor A. S. Pearse.

The Progress of Science:

The Atlantic City Meeting of the American Medical Association; Medicine as a Determining Factor in War; Joseph Barrell; Scientific Items.

 The MONTHLY will be sent to new subscribers for six months for One Dollar.

SUBSCRIPTION ORDER

To THE SCIENCE PRESS,

Publishers of THE SCIENTIFIC MONTHLY,

Sub-Station 84, New York City.

Please find enclosed check or money order for three dollars, subscription to THE SCIENTIFIC MONTHLY for one year, beginning August, 1919.

Name.....

Address.....

Single Number 30 Cents

Yearly Subscription \$3.00

THE SCIENCE PRESS

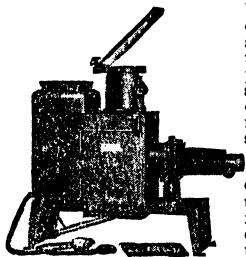
Lancaster, Pa.

Garrison, N. Y.

Sub-Station 84; New York

Bausch^{and} Lomb Balopticon

The Perfect Stereopticon



Combined Balopticon
for Lantern Slides
and Opaque Objects—

Price, \$150.

With its technically correct optics and brilliant illuminating system will give you the most satisfactory results possible to obtain on the screen—whatever the form of projection. There is a model for every purpose, simple in construction and almost automatic in operation.

Our greatly enlarged facilities, now being released from important war work, will enable us to increase production in this line. Under present readjustment conditions, however, it will be to your advantage to anticipate your requirements as far ahead as possible.

Write for catalog, with revised price list, and enter your order now for fall delivery.

Bausch & Lomb Optical Co.

408 ST. PAUL ST., ROCHESTER, N. Y.

NEW YORK WASHINGTON CHICAGO SAN FRANCISCO

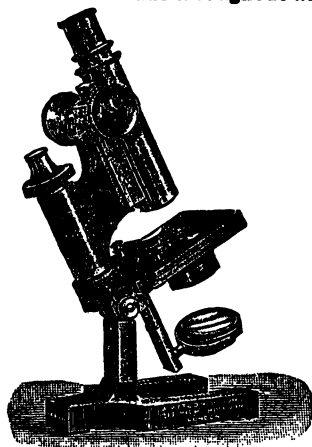
Leading American Makers of Photographic Lenses, Microscopes, Projection Apparatus, (Balopticons), Ophthalmic Lenses and Instruments, Photomicrographic Apparatus, Range Finders and Gun Sights for Army and Navy, Searchlight Reflectors, Stereo-Pair Binoculars, Magnifiers, and Other High-Grade Optical Products

W. Watson & Sons, Ltd.

BRITISH MADE

STUDENTS MICROSCOPES

The "Praxis" Stand is the Student's model par excellence. Made throughout with the same accuracy



and finish as on Watson's highest priced Stands.

A few special points are:—Standardization so that additional movements may be fitted as required. Lever fine adjustment. Constructed of two solid castings and indestructible. All parts re-slotted and sprung to compensate for wear.

Catalogue of Microscopes and Accessories for all purposes gratis on request from

W. WATSON & SONS, Ltd.

Established 1837

313, High Holborn, London, England

Refracting and Reflecting Astronomical Telescopes

Standard and Portable

Visual and Photographic OBJECTIVES

Computed by our associate

Dr. F. R. MOULTON

(Chicago University)

OBSERVATORIES

Specula, Planes, Eyepieces, etc.

Photographs and Circulars on request

LOHMANN BROS.

GREENVILLE, OHIO

:: :: :: ::

U. S. A.

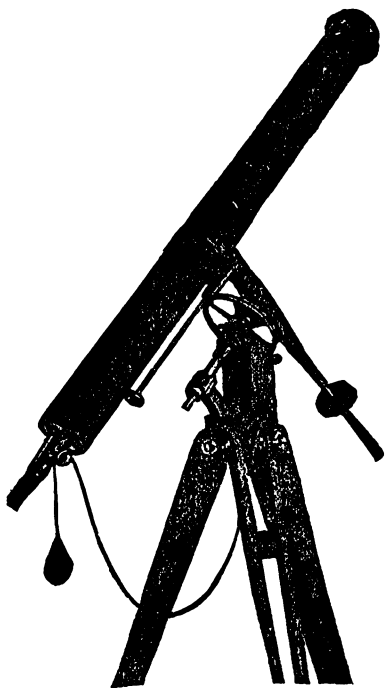


Illustration shows 5-in. with
pneumatic clock